

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Attachment No. 2

INITIAL STATEMENT OF REASONS**CALIFORNIA CODE OF REGULATIONS**

TITLE 8: Chapter 4, Subchapter 4, Article 2, Section 1523 of the Construction Safety Orders

Illumination for Nighttime Highway Construction Projects**SUMMARY**

This proposed rulemaking action is being initiated in response to a petition (Petition File No. 431) submitted by Mr. Ray Ruggles (Petitioner), Construction Safety Coordinator, District 11, California Department of Transportation (Caltrans). The Petitioner requested that the minimum illumination intensity level for road construction work be increased from 5 foot-candles to 10 foot-candles (fc), stating that the minimum illumination intensity level of 5 fc currently required by Construction Safety Orders Section 1523 for nighttime highway construction work is marginally adequate.

The Petitioner stated that, due to high traffic densities in metropolitan areas during the daytime, most road construction work has gradually moved from daytime to nighttime. More than 90 percent of Caltrans contracts in metropolitan areas require night work schedules. In some areas the traffic densities are among the highest in the world. The current 5 fc standard for minimum illumination for outdoor construction areas was adopted when highway construction work was usually done during the day and the traffic densities were low. Current industry practice dictates that, in some situations, the highway construction workers perform their tasks in proximity to (sometime inches from) passing traffic.

The Petitioner further indicated that 5 fc intensity of illumination specified in the table in Section 1523 is barely enough for the typical outdoor construction work area. Modern-day highway construction night-work has become increasingly complex. In some cases, there is continuous entering and exiting of construction traffic in long, narrow areas adjacent to high-speed highway traffic. Under these conditions, the current illumination standard is not adequate for illuminating the large expansive areas and providing early warning to approaching motorists that workers are present in the vicinity. The Petitioner, therefore, believes that workers on foot would be more readily recognized with increased illumination.

SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION

In developing this proposal, Board staff learned that the California Department of Transportation has already implemented the proposed 10 fc illumination requirement on all its highway construction jobsites in California. In addition, staff also learned that the 10 fc illumination requirement is a condition of Caltrans contracts with private sector highway construction companies through contractual arrangement between the state and private sector construction firms.

Staff also consulted with Mr. Carl K. Andersen, Manager, Photometric and Visibility Laboratory, Federal Highway Administration, Office of Safety Research and Development, who provided staff with a copy of “Illumination Guidelines for Nighttime Highway Work”, prepared by the University of Florida for the National Cooperative Highway Research Project, Transportation Research Board and the National Research Council. These guidelines represent the latest state-of-the-art criteria for setting appropriate illumination levels for nighttime highway work and is anticipated to eventually serve as a basis for a revised national consensus standard on this issue. This proposal is based on the findings contained in these guidelines, which is included in the Reference Documents contained in this rulemaking file along with a copy of the petition, the Board’s Petition Decision, and the amended Petition Decision.

This proposed rulemaking action contains several nonsubstantive editorial revisions. These nonsubstantive revisions are not all discussed in this Informative Digest. However, these proposed revisions are clearly indicated in the regulatory text in underline and strikeout format. In addition to these nonsubstantive revisions, the following actions are proposed:

Section 1523. Illumination.

Section 1523 contains specific regulatory language requiring all construction areas, ramps, corridors, offices, shops and storage areas, etc., to be provided with illumination that meets the intensities specified in a minimum illumination intensities table for various categories of indoor and outdoor construction sites and activities. The table currently specifies four different illumination intensities for various areas or operations. This table does not specify a category or an illumination intensity for nighttime highway construction work.

An amendment is proposed to include in the table an illumination intensity level of 10 fc for nighttime highway construction work. The proposed amendment is necessary to ensure that employees conducting nighttime highway construction work will be provided with adequate illumination to safely and efficiently perform his/her tasks and to be made visible to oncoming traffic.

In addition, it is proposed to update the American National Standard, A11.1-1973, Practice for Industrial Lighting document reference, which is no longer in print and is unavailable to the general public, to the latest industrial lighting standard published by the Illuminating Engineering Society (IES) of North America, American National Standard (ANSI) IES, Publication RP-7-1991 for industrial lighting. The proposed amendment is necessary to replace the existing informational reference document with that which is currently available to the public.

A new subsection (b) is proposed to clarify that nighttime construction illumination is to be provided in the work zone in a manner that will minimize glare to work crews and not interfere with the night vision

of oncoming motorists by providing screens, varying the beam angle, etc. Proposed new subsection (b) is necessary to ensure that the increased illumination required to be provided during nighttime highway construction work will not create a glare problem to both construction site workers and the motoring public.

DOCUMENTS RELIED UPON

1. Petition to Amend Section 1523 of the Construction Safety Orders dated March 8, 2001, filed by Ray Ruggles (Petitioner), Construction Safety Coordinator, District 11, California Department of Transportation (Caltrans).
2. Occupational Safety and Health Standards Board Petition Decision adopted July 19, 2001, OSHSB Petition File No. 431, Mr. Ray Ruggles, Petitioner, representing Caltrans.
3. Occupational Safety and Health Standards Board Amended Petition Decision adopted April 17, 2003, OSHSB Petition File No. 431, Mr. Ray Ruggles, Petitioner, representing Caltrans.
4. American National Standards Institute, ANSI/IES RP-7-1991, American National Standard Practice for Industrial Lighting, Preface and Section 2, General Conditions.
5. Illumination Guidelines for Nighttime Highway Work, Final Report, Prepared for National Cooperative Highway Research Program, Transportation Research Board, National Research Council, University of Florida, January 2002.

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

DOCUMENTS INCORPORATED BY REFERENCE

None.

REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small businesses.

SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal will not mandate the use of specific technologies or equipment.

COST ESTIMATES OF PROPOSED ACTION

Costs or Savings to State Agencies

No costs or savings to state agencies will result as a consequence of the proposed action. It should be noted that the California Department of Transportation has already implemented the proposed 10 fc illumination requirement on all its highway construction jobsites in California. In addition, staff also

learned that the 10 fc illumination requirement is a condition of Caltrans contracts with private sector highway construction companies through contractual arrangement between the state and private sector construction firms.

Impact on Housing Costs

The Board has made an initial determination that this proposal will not significantly affect housing costs.

Impact on Businesses

The Board has made an initial determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

Cost Impact on Private Persons or Businesses

The Board is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under “Determination of Mandate.”

Other Non-discretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose non-discretionary costs or savings on local agencies.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed regulation does not impose a local mandate. Therefore, reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, this regulation does not constitute a “new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.”

The California Supreme Court has established that a “program” within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on

local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

The proposed regulation does not require local agencies to carry out the governmental function of providing services to the public. Rather, the regulation requires local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, the proposed regulation does not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

This proposed regulation does not impose unique requirements on local governments. All employers - state, local and private - will be required to comply with the prescribed standards.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments may affect small businesses.

ASSESSMENT

The adoption of the proposed amendments to this regulation will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.